Metra inženiring d.o.o.

Control Unit ELS Keypad *Technical Manual*

Table of contents

Control Unit ELS Keypad *Technical Manual* 2
Product description 2
Basic Parts 3
Display Unit 3
Control Unit PCB 3
Coin acceptor (optional) 4
Euro deposit pad (optional) 4
Fingerprint module (optional) 4
Lockers ready for Control Unit installation 5
Electronic locks connection 5
Display Unit connection 5
Power supply connection 6
Network connection 6
Tamper sensor connection (optional) 7
Coin Acceptor connection (optional) 8
Signalization 8
Power-on signalization on Display Unit 8
Power-on signalization on Control Unit PCB 8
Operation signalization on Control Unit PCB 9
Operating modes 9
Advices for locker manufacturers 10
Operating parameters 10
Setting Operational parameters – via network 11
Setting Operational parameters – by Display Unit's keypad 11
Actions initiated – by Display Unit's keypad 15
Setting Operational parameters – via serial port by notebook 15
Alarm signalisation 16
Checking Alarm functionality 16
Functional Test 16
Checking locker wiring order 17
Locking / Unlocking of All Lockers 17
Service procedures 17
Control Unit PCB replacement 18
Display Unit replacement 18
Maintenance 19
Cleaning 20
Troubleshooting Guide 20
Technical data 20
Appendix 21

Control Unit ELS Keypad *Technical Manual*

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System:	**Metra ELS – Electronic Locking Systems**
Product Group:	**Control Unit ELS Keypad**
Types:	• **ELCUKP**
Year of Construction:	2003 - 2006

Declaration of Conformity: CE The Metra ELS products have been developed, designed and manufactured in accordance with the EU directive for *Electromagnetic Compatibility (2004/108/EC)*.

Control Unit ELS Keypad Technical Manual [rev.1-091208]
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• Product description

Control unit ELS Keypad is used in Metra Electronic Locking System (ELS) which is primarily designed and used for locking lockers.
Control unit ELS Keypad has two basic components: Control unit PCB and Display unit. Control unit PCB drives and monitors up to 16 directly connected Metra Electronic Locks (see also: Electronic Lock) and other enhancing accessories.
Display Unit (also connected to CU PCB) is the products user interface. It consists of a 4-digit LED display to show locker numbers (and other UI messages) and a 12 key keypad to enable user interaction (PIN, locker number, etc.).

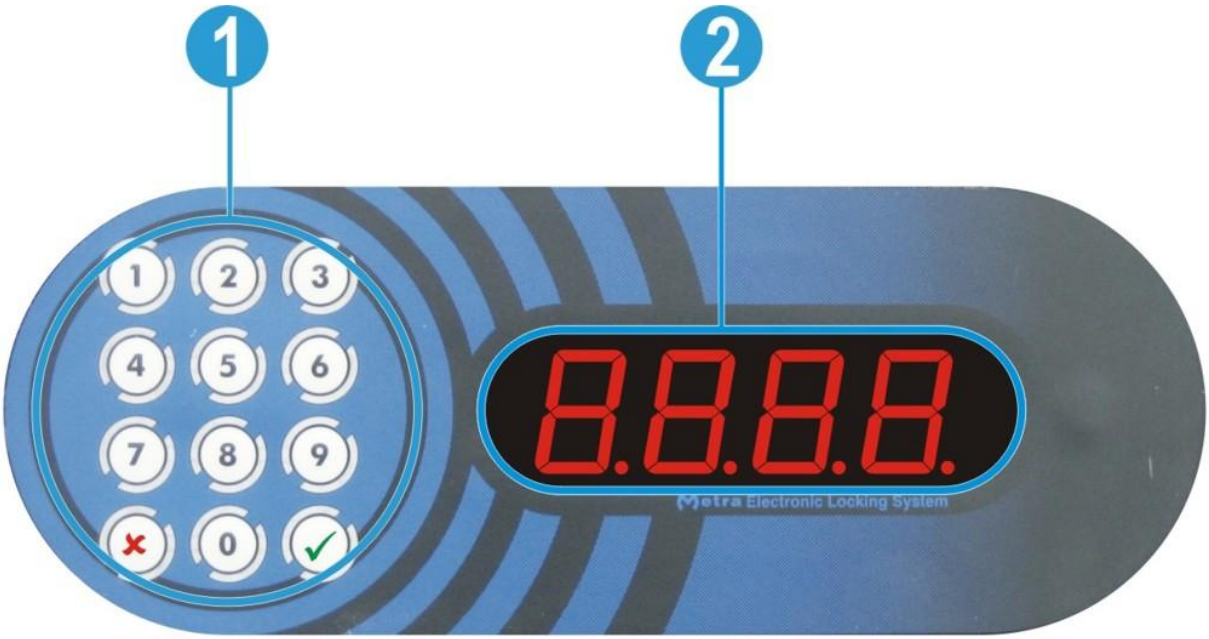
Enhancing accessories:

- A Fingerprint module can be added to lock/unlock lockers simply by placing the finger
- Euro deposit pad limits locker misuse
- Coin acceptor generates revenue from locker use

Product can be used totally independent of Metra network; Wiring all the Control units into a network and adding a Network controller ELS enables additional alarm notification and remote unlocking of locks by pushbutton.
Operating parameters are set up through display unit's keypad and stored in internal battery powered memory. To simplify setup of control units and master/setup code management also Metra ELS SW can be used.

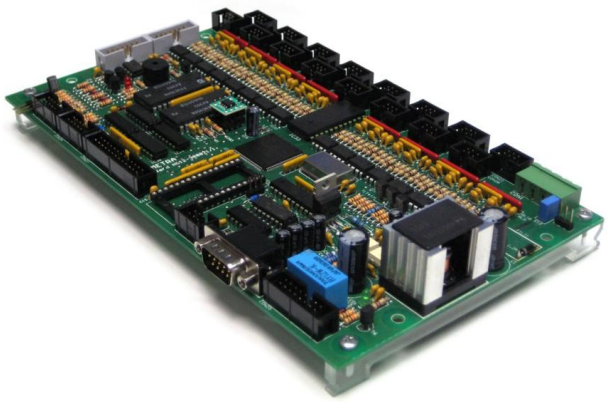
• Basic Parts

• Display Unit

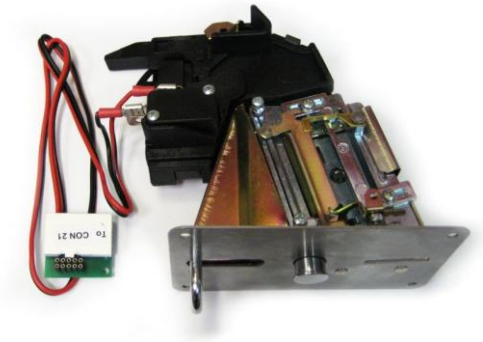


#	description
1	Keypad
2	4 digit LED display with decimal points

• Control Unit PCB



- Coin acceptor (optional)



- Euro deposit pad (optional)

Euro deposit pad is mounted under the door strike. The locker can be locked only if a coin is inserted. The coin is used as a deposit while the locker is closed/locked.

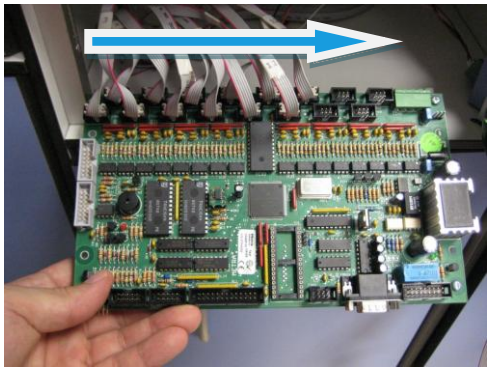
- Fingerprint module (optional)

Fingerprint module allows users to lock/unlock the locker instead with PIN number simply by presenting the finger to sensor. It offers higher comfort for users as they don't need to remember PIN code. When fingerprint module is connected to ELS keypad control unit each user can freely choose whether he/she will lock the locker using fingerprint or PIN code.

• Lockers ready for Control Unit installation

- Each bank of up to 16 Lockers must have special designed box for Control Unit as it is described in Electronic Lock Installation Information. See Appendix from 7 to 9 for Control Unit Box measures.
- All cables from Electronic Locks must be wired to the Control Unit Box.
- 12 VDC and Metra NET Network (CAN) must be wired to the Control Unit Box. See *Power Supply Devices – Installation Manual* and *Metra NET Network – Installation Manual* for more details.

• Electronic locks connection



Plug the cables from Electronic Locks to FLAT 6 connectors on Control Unit PCB.

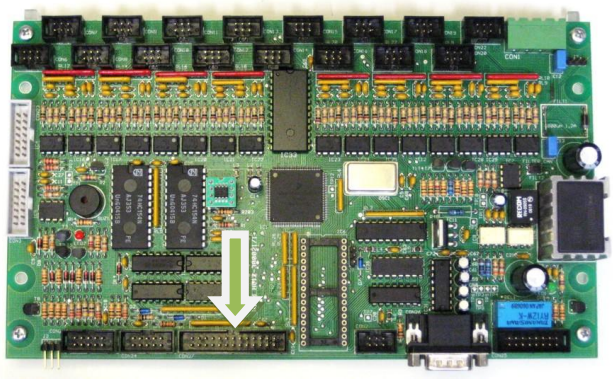
☝ NOTE ☝
Mind the ascending order of Locker numbers. Locker number is increasing from left to right (blue arrow).

Example: most left connector is locker number 120, most right connector is locker number 135.

☝ NOTE ☝
Difference between start and end locker number cannot be more than 15.

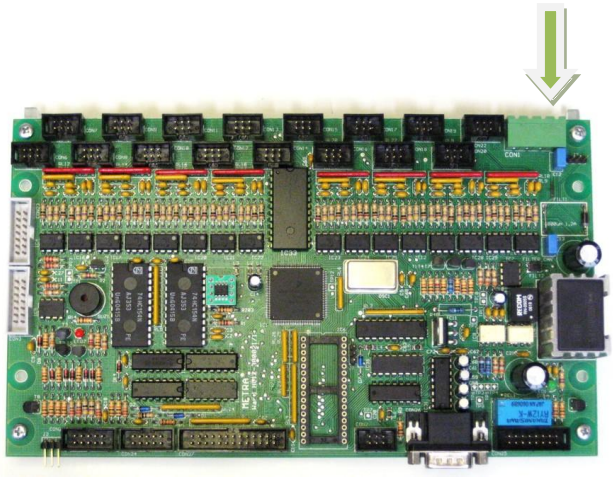
• Display Unit connection

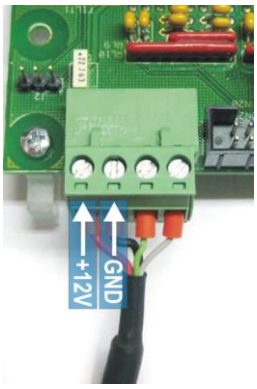
Plug in the Display Unit to FLAT 26 connector as shown in the photo. *See "Appendix 10 – Inner connections"* for connection schematic.



• Power supply connection

Regulated 12 VDC power supply is required for proper operation. Connect as many units as possible to a single power supply unit. Consult the Technical Specifications section of this document for current consumption.



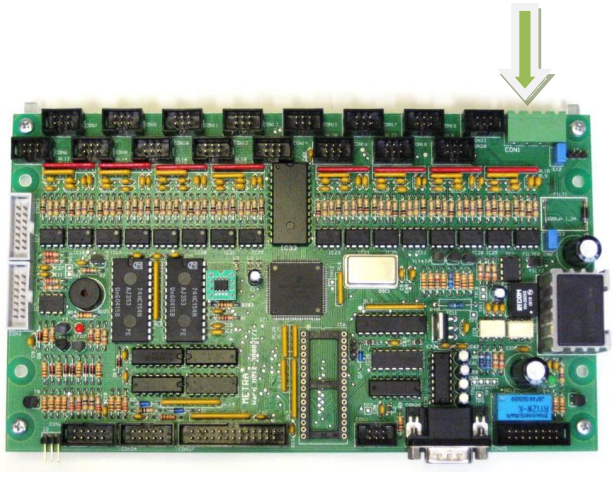


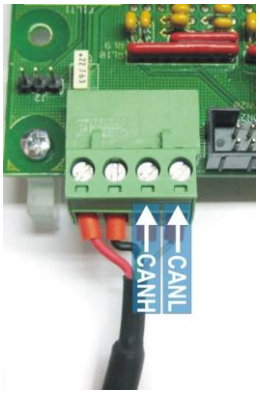
Connect 12V DC regulated power supply to designated terminals. *See "Appendix 10 – Inner connections"* for connection schematic.

☝ WARNING ☝

- Mind the polarity! Wrong polarity could result in irreparable damage to the device.
- Respect power requirements data! Using unsuitable power supply could result in damage to the power supply and to the device.

• Network connection





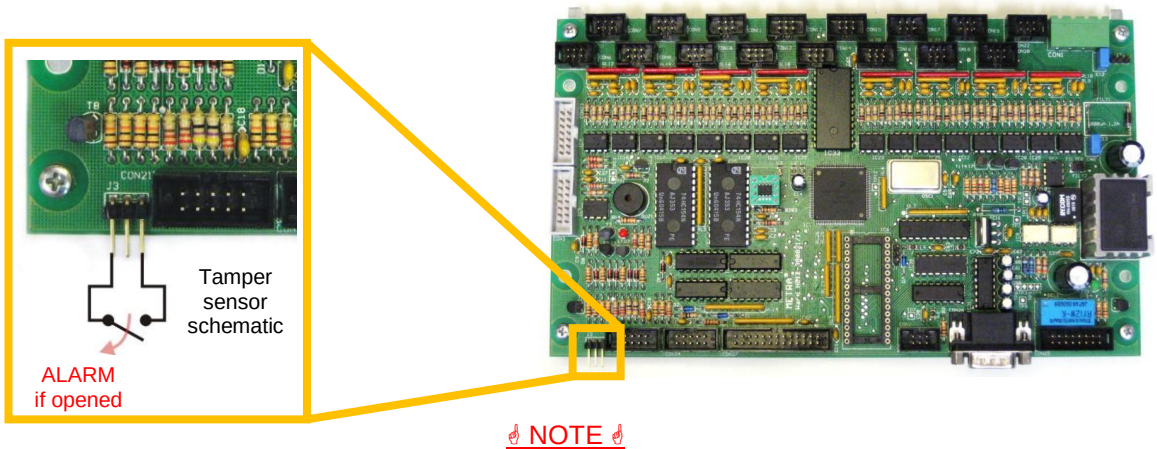
Connect the twisted pair network cable to designated terminals. *See "Appendix 10 – Inner connections"* for connection schematic.

☝ NOTE ☝

- Mind the polarity of the network connection!
- Always connect the line terminator at the far end of the network cable!
- Never connect more than one line terminator per installation!

• Tamper sensor connection (optional)

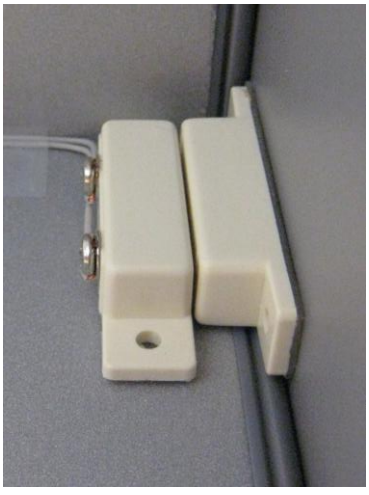
Plug in the Taper sensor to 3 pin connector as shown in the photo. *See "Appendix 12 – Tamper Alarm sensor (optional)"* for connection schematic.



☝ NOTE ☝

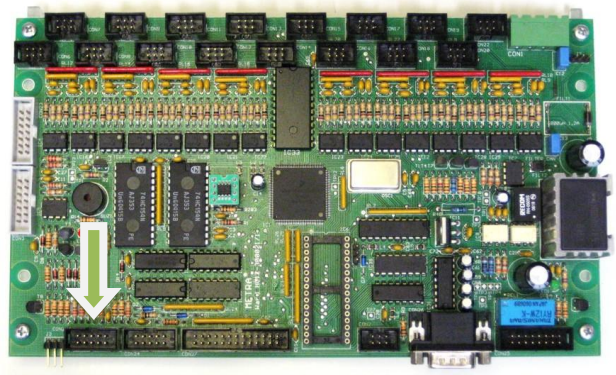
Use normally closed switch contact sensor.

Example of Tamper magnetic sensor mounting.



• Coin Acceptor connection (optional)

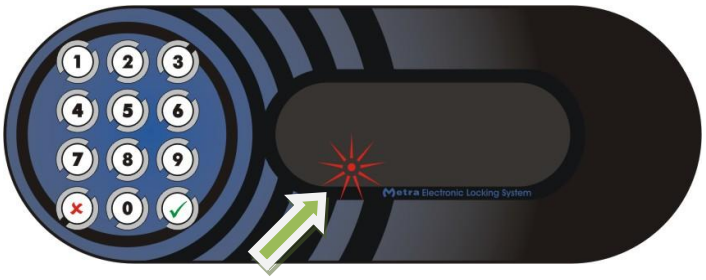
Plug in the Coin acceptor to FLAT 10 connector as shown in the photo. *See "Appendix 13 – Coin Acceptor (optional)"* for connection schematic.



• Signalization

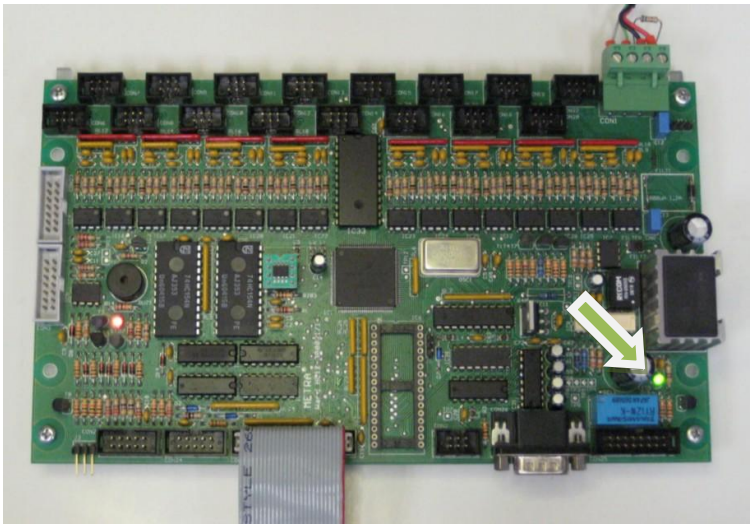
• Power-on signalization on Display Unit

When the unit is running, a red dot in the left side of display is flashing.



• Power-on signalization on Control Unit PCB

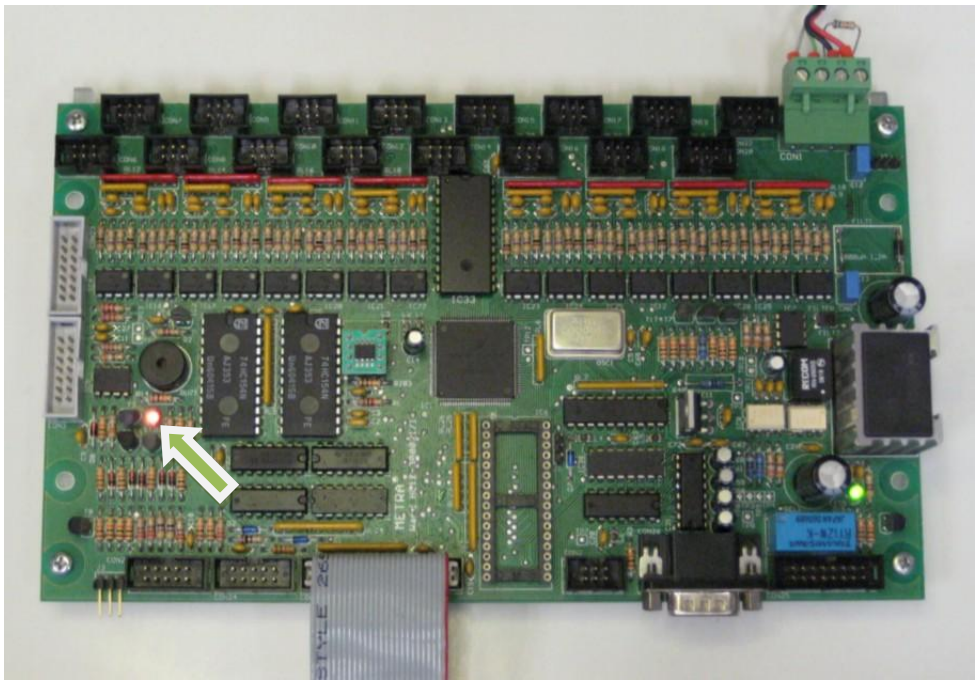
When the unit is running, a green LED is on.



• Operation signalization on Control Unit PCB

Control Unit PCB has a blinking red LED operating indicator. This signal is under software control indicating that the device is running.

Fast blinking: when parameters in Construction mode.
Slow rhythmic blink: if operating parameters downloaded.



• Operating modes

Normal

Construction

Error

• Advices for locker manufacturers

Control Unit delivered from Metra is in construction mode. It shows on display “ConS” to remind user to set his own operating parameters. Network address is not set (is set to broadcast).

• Operating parameters

parameter	default value	description
Locker Number	SLOC = 1 ELOC = 16	Has two sub-parameters: SLOC (start number) and ELOC (end number).
Master Code	1 = 1234	Has 10 sub-parameters: 10 master codes can be stored in.
Setting Code	1 = 1234	Has 10 sub-parameters: 10 setting codes can be stored in.
Audio Signal	LO	Audio signal volume.
Multiple Locking	OFF	Can be activated (on) or deactivated (OFF).
Multiple Locking Code	8000 - 9999	Used to activate multiple locking. It can be changed after different groups use the lockers (only if En-A is set to ON).
Network ID	0	Metra NET Network (CAN) address.
Emergency opening	OFF	If “On” all lockers can be unlocked at once (via Network Controller).
Auto opening	0	If set (minutes), each locked locker can be automatically unlocked after this number of minutes.
Fingerprint unlocking mode	OFF	When this parameter is ON, there is no need to type the number of locker when unlocking it. Only finger must be presented.
User Waiting time	5	This is the time (seconds) that Control Unit waits user to present the RFID Ticket after the Locker door is closed and pre-locked.
Minimal PIN Length	1	Can be set from 1 to 4 digits. This is the minimal number of digits used for locking.
Payment device	NO	Turn this parameter on YES, if payment device is connected to your Control Unit.
Number of Coins	1	Number of Coins, must be set to 1 (only if PAY is set to YES).
Coin Value	1.00	Value of the coin that is accepted by Coin acceptor (only if PAY is set to YES).
Tenancy Duration	8 h	Tenancy Duration (only if PAY is set to YES). Number of hours when no additional payment required when closing the locker with the same RFID Ticket.
Currency	Euro	Currency (only if PAY is set to YES).

• Setting Operational parameters – via network

- PC must be running and Download List in ELS/ELS NET/LCC NET software ready.
- Control Unit(s) must be in Construction Mode.
- By presentig any card (RFID card must be supported by reader on the Display unit) to the Display Unit you trigger the request for operating parameters.
- Operating parameters are downloaded to the Control Unit and sign “ConS” in no longer displayed on the Display Unit
- Check if correct operating parameters were downloaded. See chapter *“Functional Test”* for more details

☝ NOTE ☝
Mind the Download List ascending order when triggering the operating parameters requests on different Control Units.

• Setting Operational parameters – by Display Unit’s keypad

STEP 1: Press and hold the × key until “SCod” is displayed and flashing on the Display Unit.

STEP 2: Sign “I” is displayed for each Setting code digit entered.

Confirm your Setting code with the ✓ key.

STEP 3: If correct Setting code was entered “LOCn” as a part of the parameter setting mode menu is displayed.

When you enter parameters setting mode. You can scroll down through menu by pressing on any of the digit keys. Use the ✓ key to Enter and ✗ key to cancel.

✗ Key	Down Keys	✓ Key
Cancel	For scrolling down through the menu.	Enter

parameter	procedure
Locker Number	While sign “LOCn” is displayed press the ✓ key. Sign “SLOC” starts flashing on a display (first locker number). Confirm it with the ✓ key. With digit keys on the Keypad enter the number of the first locker (the lowest locker number on this Control Unit). Confirm it with the ✓ key. Sign “ELOC” starts flashing on a display (end locker number). Confirm it with the ✓ key. Enter the number of the last locker (the highest locker number on this Control Unit). Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode. ☝ NOTE ☝ Difference between start and end locker number cannot be more than 15.
Master Code	While sign “CodE” is displayed press the ✓ key. Sign “nbr” is displayed. Type in the number from 1 to 10 (Up to 10 different Master Codes can be entered). Master Code can be up to 12 digits long. Display shows digit position (01 to 12) and digit (0 to 9) separated by “-“. The new Master Code must be typed in again to confirm it. Sign “ConF” is flashing on the display. Type in the new Master Code again and confirm it with the ✓ key. If new Master Code is confirmed correctly, sign “YES” is displayed otherwise sign “no” is displayed. Control Unit returns to parameter selecting mode. ☝ NOTE ☝ If the Master Code under the number you entered allready exists, after you press the ✓ key the Master Code is displayed digit by digit (Display shows digit position (01 to 12) and digit (0 to 9) separated by “-“). After the last digit of the code is displayed, sign “CodE” starts flashing. You can cancel the procedure with ✗ key or continue with entering new code by pressing on the key for first digit of the new Master Code.

 Setting Code	While sign “SCod” is displayed press the ✓ key. Sign “nbr” is displayed. Type in the number from 1 to 10 (Up to 10 different Setting Codes can be entered). Setting Code can be up to 12 digits long. Display shows digit position (01 to 12) and digit (0 to 9) separated by “-“. The new Setting Code must be typed in again to confirm it. Sign “ConF” is flashing on the display. Type in the new Setting Code again and confirm it with the ✓ key. If new Setting Code is confirmed correctly, sign “YES” is displayed otherwise sign “no” is displayed. Control Unit returns to parameter selecting mode. ☝ NOTE ☝ If the Setting Code under the number you entered allready exists, after you press the ✓ key the Setting Code is displayed digit by digit (Display shows digit position (01 to 12) and digit (0 to 9) separated by “-“). After the last digit of the code is displayed, sign “SCod” starts flashing. You can cancel the procedure with ✘ key or continue with entering new code by pressing on the key for first digit of the new Setting Code.
 Audio Signal	While sign “Aud” is displayed press the ✓ key. Press any digit key on the Keypad to change the audio signalling to High “HI”, Low “LO” or silent “OFF”. Confirm the selection with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Multiple Locking	Remote emergency opening can be activated by pressing a button on the Network Controller (or by Timetable). Each Control Unit can be set to enable or disable this feature. While sign “En-A” is displayed press the ✓ key. Press any digit key on the Keypad to enable (On) or disable (OFF) Multiple Locking. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Multiple Locking Code	While sign “GrUP” is displayed press the ✓ key. Type in 4 digit number from 8000 to 9999. This will be the new Group PIN code for this device. Confirm the selection with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Network ID	This parameter takes effect only when several Control Units are connected to each other via single 2-wire network cable. Each Control Unit needs to have unique network ID in the range from 1 to 999. While sign “Id” is displayed press the ✓ key. With digit keys on the Keypad enter desired network ID (from 1 to 999) for this Control Unit. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Emergency opening	Remote emergency opening can be activated by pressing a button on the Network Controller (or by Timetable). Each Control Unit can be set to enable or disable this feature. While sign “EOPn” is displayed press the ✓ key. Press any digit key on the Keypad to enable (On) or disable (OFF) Emergency opening. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.

 Auto opening	Automatic opening can be set to open all lockers connected to the control unit after desired time. Time can be set in minutes from 1 to 9999 minutes. If 0 is selected then automatic opening is turned OFF. While sign “AOPn” is displayed press the ✓ key. With digit keys on the Keypad enter desired time in minutes. Set time to 0 to disable (OFF) Automatic opening. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Fingerprint unlocking mode	Fingerprint SIMPLE unlocking mode is activated through parameter “Fin”. When parameter “Fin” is ON, there is no need to type the number of locker when unlocking it. Only finger must be presented and locker opens. While sign “Fin” is displayed press the ✓ key. Press any digit key on the Keypad to enable (On) or disable (OFF) SIMPLE unlocking mode. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 User Waiting time	While sign “USr” is displayed press the ✓ key. With digit keys on the Keypad enter desired time in seconds. Time can be set from 2 to 8 seconds in 1 second steps. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Minimal PIN Length	Minimal PIN Code length is set to 1 by default. This means that someone can close the locker with minimal 1 digit or maximal 4 digit PIN Code. This parameter can be also set up to 2, 3 or 4. If set to 4, only 4 digit PIN codes are accepted. While sign “PinL” is displayed press the ✓ key. With digit keys on the Keypad enter desired minimal PIN Code length (from 1 to 4) for this Control Unit. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
 Payment device	While sign “PAY” is displayed press the ✓ key. Press any digit key on the Keypad to enable (on) or disable (OFF) payment device. Confirm the selection with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode. ☝ NOTE ☝ After the PAY parameter is set to “On”, four additional sub-parameters are accessible in parameter selecting mode. Set them regarding your Coin Acceptor (Currency, Value of used coins and number of Coins) and required Tenancy Time (value OFF means payment for every locking procedure).
 Number of Coins	While sign “P no” is displayed press the ✓ key. With digit keys on the Keypad enter desired number of coins needed for locking the locker. Number of coins can be set from 1 to 5 in 1 coin steps. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode. ☝ NOTE ☝ It is recomended that the number of coins is set to 1.
 Coin Value	While sign “P co” is displayed press the ✓ key. Press any digit key on the Keypad to select desired coin value. Coin values that can be selected are: 0.10, 0.20, 0.25, 0.50, 1.00, 2.00 and 5.00. Confirm it with the ✓ key. **NOTE: Choose the proper value regarding your coin acceptor** When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.

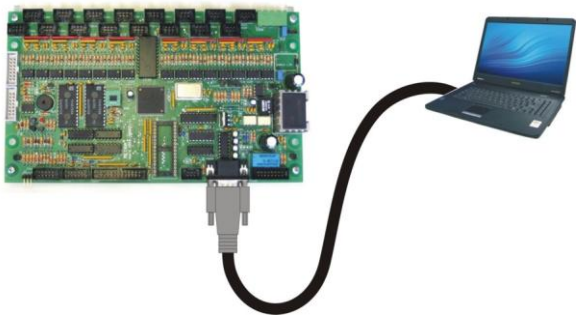
Tenancy Duration	While sign “P dU” is displayed press the ✓ key. Press any digit key on the Keypad to select desired tenancy duration. Tenancy duration can be set from 0 hour to 24 hours in 1 hour steps. If 0 is selected there are no limits once locker is paid. It can be locked and unlocked any time without payment. If OFF is selected payment is needed on every locking procedure. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.
Currency	While sign “P dS” is displayed press the ✓ key. Press any digit key on the Keypad to select desired currency. Currency can be set to: Euro, Coin, GbP, PAY and USd. Confirm it with the ✓ key. When parameter setting is accepted, sign “YES” is displayed. Control Unit returns to parameter selecting mode.

• Actions initiated – by Display Unit’s keypad

For technical details about how to enter Parameters setting mode, see chapter **Setting Operational parameters – by Display Unit’s keypad**.

action	procedure
Resetting values to construction ones	This erases all current parameter values and sets them back to factory default parameter values. While sign “COnS” is displayed press the ✓ key. “SHUr” is displayed and blinking. Press and hold the ✓ key for a few seconds to confirm or press ✗ key to cancel. When parameter setting is accepted, sign “YES” is displayed if ✓ key was pressed or sign “no” is displayed if ✗ key was pressed. Control Unit returns to parameter selecting mode.

• Setting Operational parameters – via serial port by notebook



- Export the Download file from the ELS/ELS NET/LCC NET software by clicking on “Get Download File” button.
- Copy exported file (*.lccdwnld) to the Laptop computer.
- On the Laptop computer run LCC Download software.
- Connect the Control Unit to the Laptop via RS-232 port and download exported file to the Control Unit.

• Alarm signalisation

If locker brake-in is detected the alarm notice is displayed.

The interrupted acoustic signal is turned on. Display Unit alternately shows '-AL-' notice and the locker number.

• Checking Alarm functionality

The purpose of the test is to make sure that each Electric Lock functions properly. Locks can be tested only when they are unlocked (locker door opened).

- **Checking of locker Alarm**

Simulate locking procedure without closing the Locker door (press on the plunger). After the Lock is locked, release the plunger and ALARM has to be activated.

- **Checking of Control Unit box Alarm**

When MASTER Card is not present, ALARM will activate each time you open Control Unit Box (CU Box ALARM switch must be connected).

• Functional Test

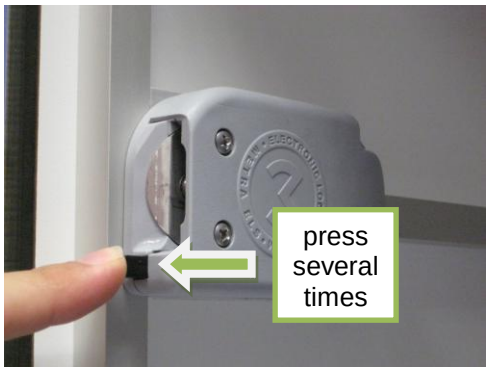
We assume that all lockers are assembled correctly as it is described in Electronic Lock Installation Information and all cables correctly wired and connected to the Control Unit.

Sign “COnS” should no longer be displayed on Display Unit.
Checking the lockers wiring order
Closing the lockers
Locking the lockers
Unlocking the lockers

This test is performed at the end of installation procedure. This test can also be done prior to installation on the field (technical failure can occur during the transport).

☝ NOTE ☝
Check if Control Unit is powered on.

• Checking locker wiring order



Slowly press and release the plunger of each Electric Lock several times.

After fourth press the Locker number appears on the display.

☝ NOTE ☝
Check if displayed number corresponds to the Locker number fixed on the door!

☝ NOTE ☝
When in "Construction mode" (sign "COnS" is displayed), locker numbers (indexes) are from 1 to 16 for each Control Unit.

• Locking / Unlocking of All Lockers

The purpose of the test is to make sure that each Electric Lock functions properly. Locks can be tested only when they are unlocked (locker door opened).

- **Locking procedure**

See Control Unit ELS RFID User Manual – Normal locking procedure.

- **Unlocking procedure**

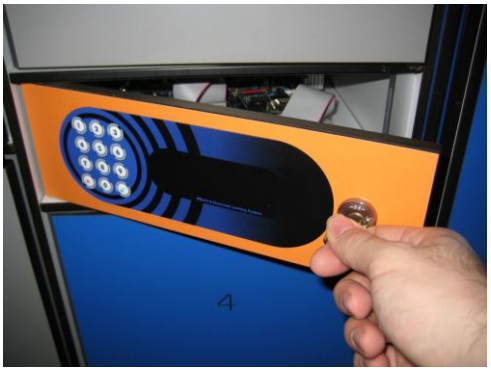
See Control Unit ELS RFID User Manual – Unlocking procedure.

• Service procedures

This chapter describes possible repair procedures for Electronic Locker – based on the spare parts list in the document "**METRA ELS Electronic Locker Order Information**". The problem should be identified before any repairing is tried.

☝ NOTE ☝
Disconnect the power supply connector before changing any cables!

• Control Unit PCB replacement



STEP 1: Disconnect the power supply.

☝ NOTE ☝
Disconnect the adapter not the wires fixed on the PCB to avoid short circuit.

STEP 2: Open the Control Unit box (see Locker manufacturer's documentation).

STEP 3: Disconnect all cables and **mark their exact position.**

STEP 4: Replace the Control Unit with a new one.

STEP 5: Reconnect all cables **exactly the same as they were connected previously**.

STEP 6: Fix the Control Unit PCB inside its box.

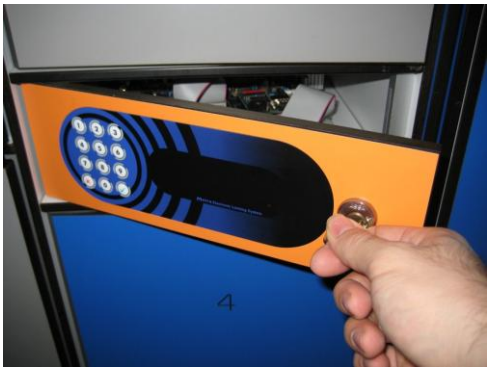
STEP 7: Power on the Electronic Locker.

STEP 8: Download parameters as they were on the previous Control Unit.

• Display Unit replacement

This action is generally performed if mechanical parts of the Front Panel are damaged or if some electronic parts of the front panel (display, signal lights) fail.

For procedure of changing the mechanical part of the Front Panel, follow the Locker Manufacturer's Instructions!



STEP 1: Disconnect the power supply.

☝ NOTE ☝
Disconnect the adapter not the wires fixed on the PCB to avoid short circuit.

STEP 2: Open the Control Unit box (see Locker manufacturer's documentation).

STEP 3: Disconnect all the cables and mark their exact position.

STEP 4: Remove old Display Unit from the Control Unit's box panel.

STEP 5: Replace the Display Unit front panel with a new one (see the Locker Manufacturer's Documentation).

STEP 6: Reconnect all cables exactly the same as they were.

STEP 7: Close the Control Unit box (see Locker manufacturer's documentation).

• Maintenance

No special maintenance is needed.

The maintenance people should check the device operation at least once a year. Regular cleaning is recommended.

• Cleaning

Program “LCC Sale” runs by double clicking on LCC Sale icon in Windows Start menu. Login window opens – valid username and password must be typed.

Regular cleaning is recommended. Display Unit should be cleaned using soft cloth and dedicated cleaners for plastic surfaces e.g. car dashboard cleaning agents. Do not use any aggressive or abrasive agents or solvents as they might cause permanent damage to the device surface.

See Locker manufacturer instructions for proper cleaning procedure.

Direct spraying or splashing water can cause damage to Control Unit or Electric Locks!

• Troubleshooting Guide

trouble	explanation / solution
Locker door closed while locking and nothing happens.	Adjust the door strike. Check the Electric Lock. Replace the Electric Lock if necessary.
The Locker door not ejected when unlocked.	Adjust the door strike.
Display shows »Err«.	Check the Display Unit. Replace it if necessary.
Right red dot on a display is turned on.	Check the doors (if any jammed – Unlocked Lock & Closed Door at the same time). Check the Download parameters, if all set locks (from 1-16) are also connected to the PCB.

• Technical data

Operating voltage	12V DC regulated (11.5 – 15V DC tolerated)
Current consumption	0.65 A peak, 0.45 A average
Operating temperature range	0 to +50 °C
Audio signal	integrated piezoelectric beeper
Visual signalization	4 digit LED display with decimal points.
Alarm output	Normally opened and normally closed contact (1A – 120 VAC, 60

	VDC)
Network type	CAN network interface to Network Controller
Buffer capacity	40 records

• Appendix

1 - 6 Setting operational parameters and initiating actions – by Display Unit's keypad
7 Control Unit Box - Technical drawing A
8 Control Unit Box - Technical drawing B
9 Front panel - Technical drawing of Display Unit
10 Inner connections
11 Download connection
12 Tamper alarm sensor (optional)
13 Coin Acceptor (optional)
14 Network schematic
15 Cable installation
16 Electric Locks connection (example 1)
17 Electric Locks connection (example 2)
18 Main Module (example)
19 Standard Module (example)
20 Bank of lockers (example)

ELS Control Unit Keypad
Setting operational parameters and initiating actions - by Display Unit's keypad

Menus

PARAMETER

PARAMETER

PARAMETER

PARAMETER

PARAMETER

PARAMETER

PARAMETER

PAERAMETER

PAERAMETER

PAERAMETER

PAERAMETER

PAERAMETER

ACTION

PARAMETER

PARAMETER

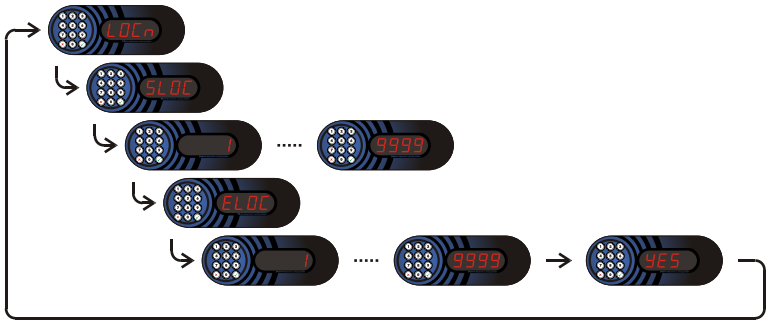
PARAMETER

PARAMETER

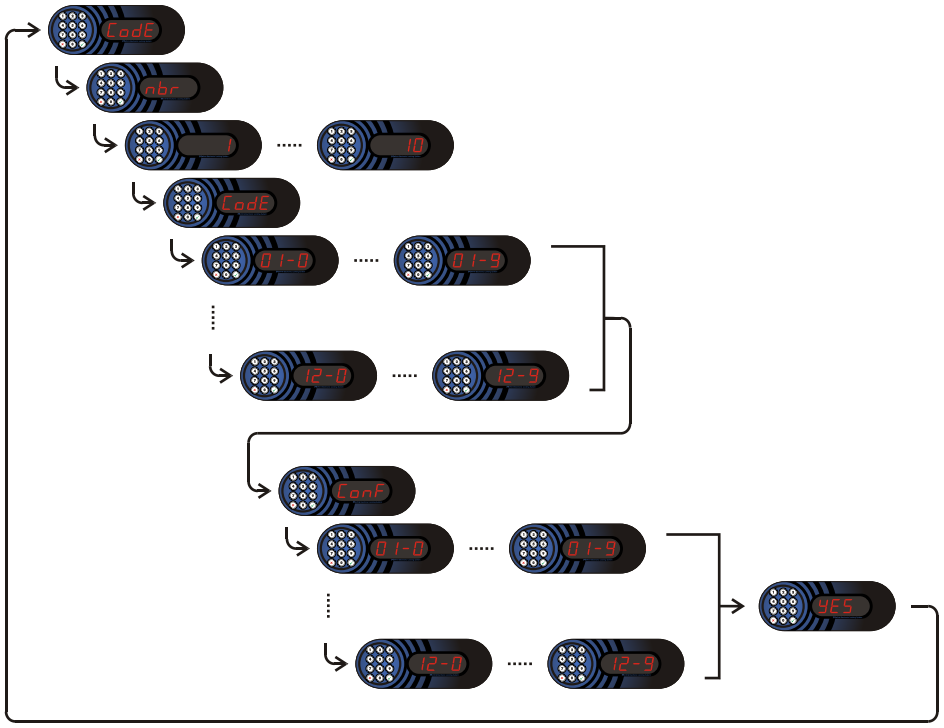
PARAMETER

ELS Control Unit Keypad
Setting operational parameters and initiating actions - by Display Unit's keypad

Changing locker numbers PARAMETER

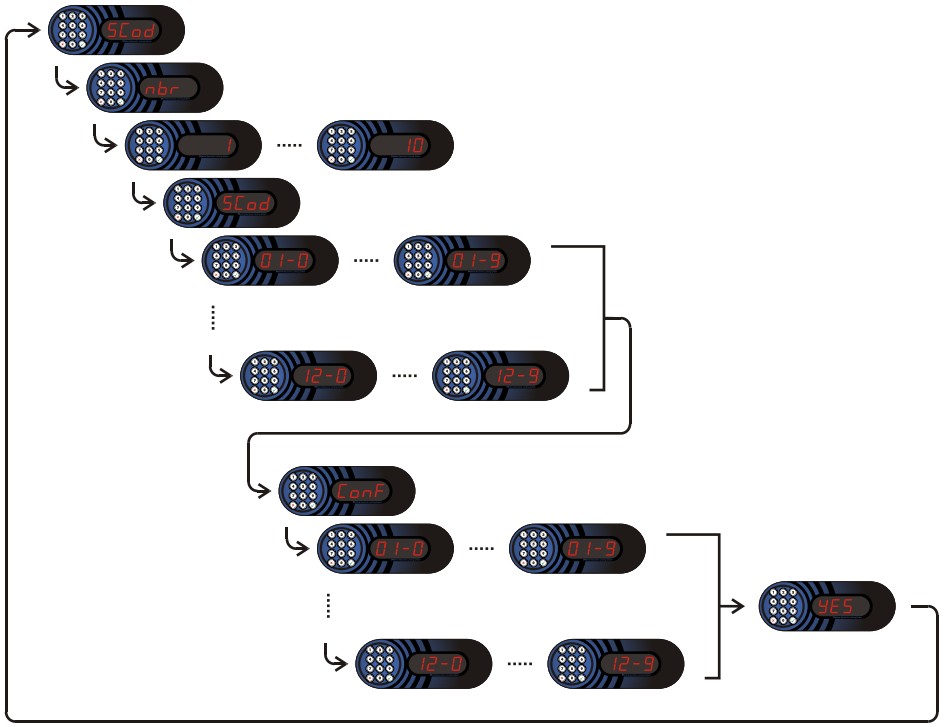


Setting MASTER Pin Code(s) PARAMETER

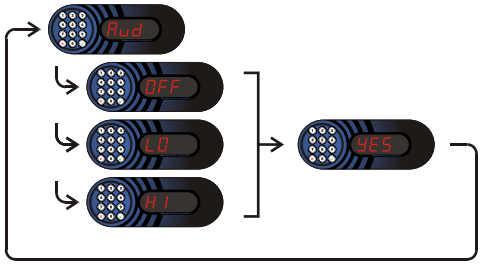


ELS Control Unit Keypad
Setting operational parameters and initiating actions - by Display Unit's keypad

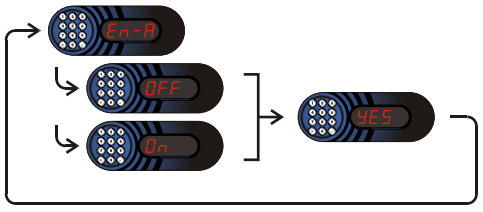
Setting SETTING Pin Code(s) PARAMETER



Changing audio signal PARAMETER



Setting Multiple Locking PARAMETER

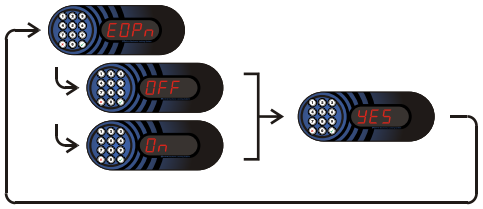


Setting Multiple Locking PIN Code PARAMETER

ELS Control Unit Keypad
Setting operational parameters and initiating actions - by Display Unit's keypad

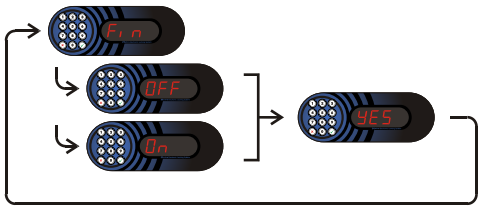
Setting network ID PARAMETER

Setting Emergency opening PARAMETER

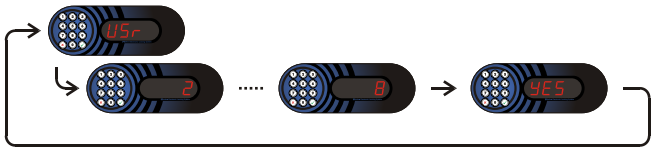


Setting Automatic opening PARAMETER

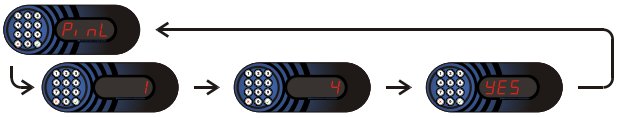
Setting Fingerprint unlocking mode PARAMETER



Setting up user waiting time PARAMETER

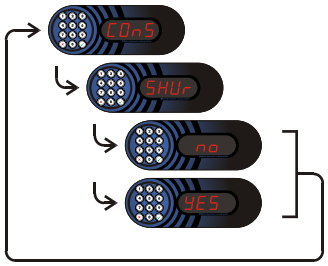


Minimal PIN Code length PARAMETER

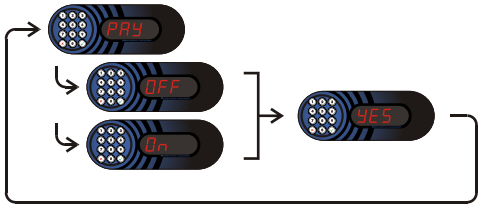


ELS Control Unit Keypad
Setting operational parameters and initiating actions - by Display Unit's keypad

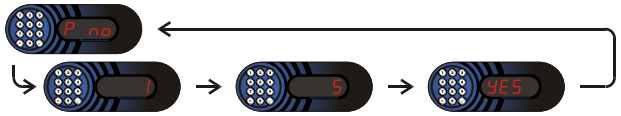
Resetting values to construction ones ACTION



Setting Pay parameter PARAMETER

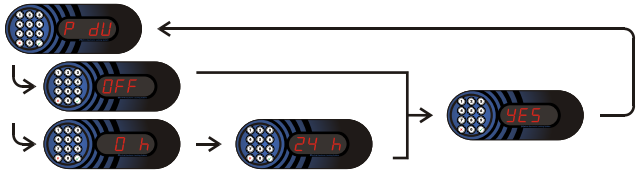


Number of coins PARAMETER



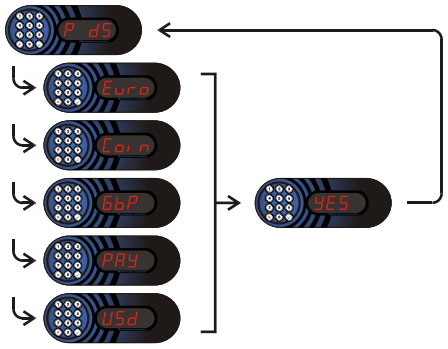
Coin value PARAMETER

Tenancy duration PARAMETER

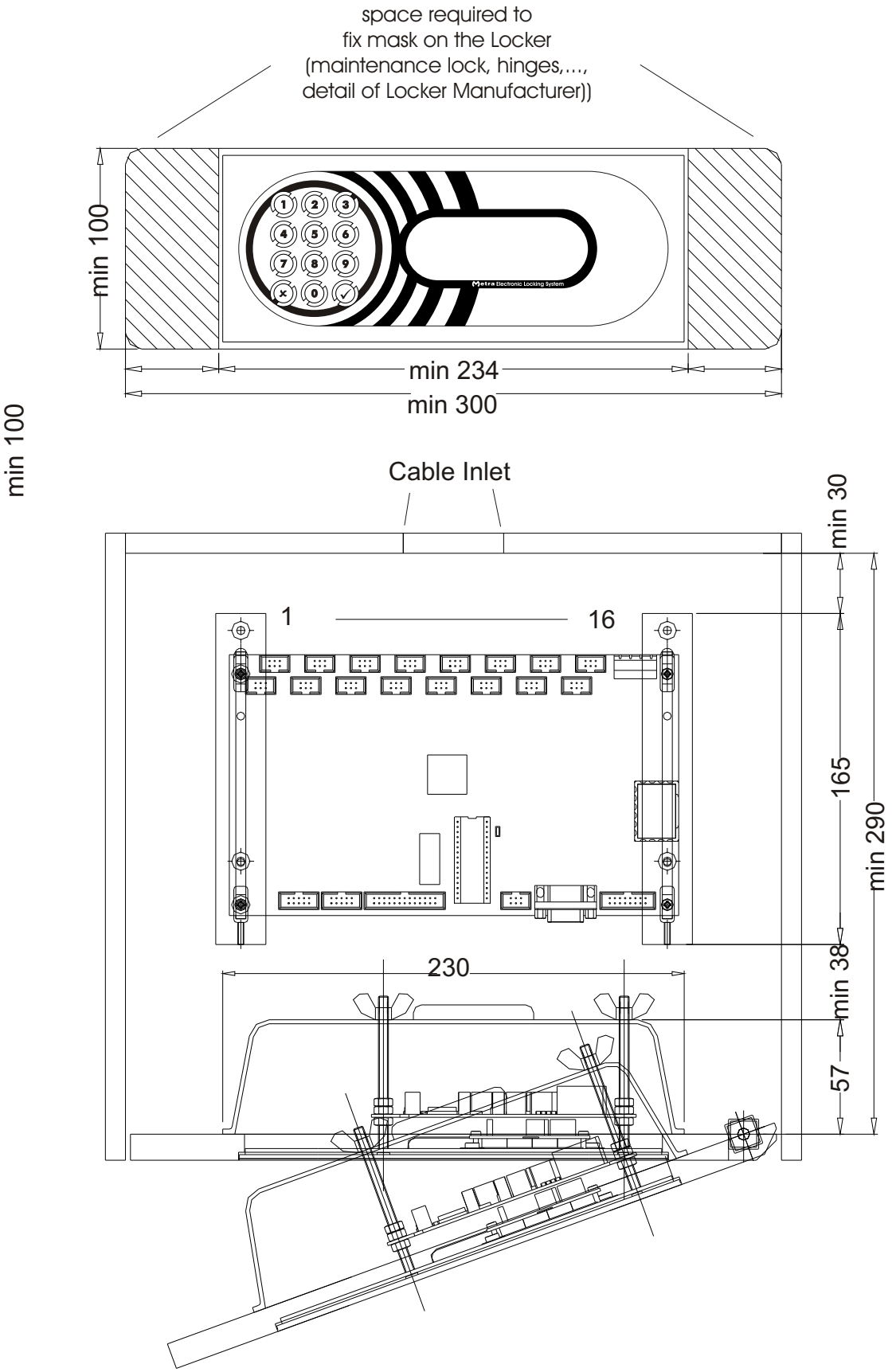


ELS Control Unit Keypad
Setting operational parameters and initiating actions - by Display Unit's keypad

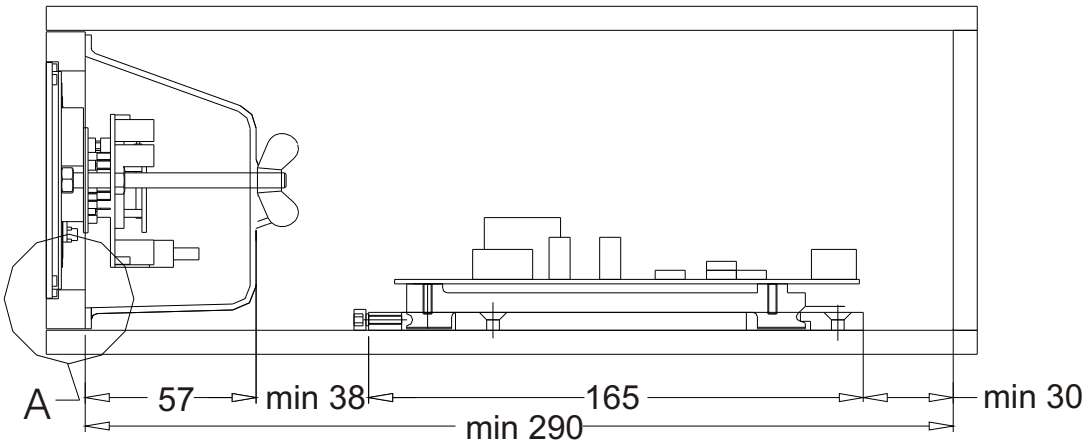
Currency PARAMETER



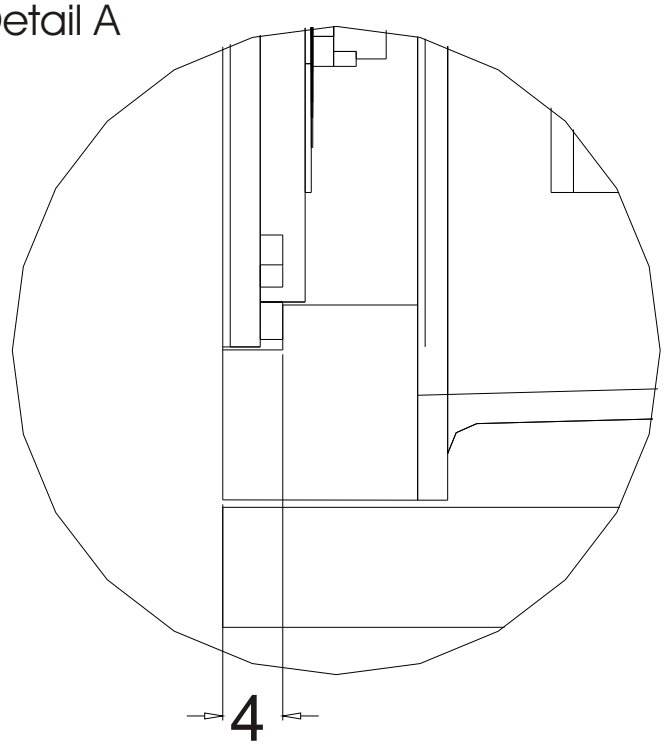
ELS Control Unit Keypad
Control Unit Box - Technical drawing A



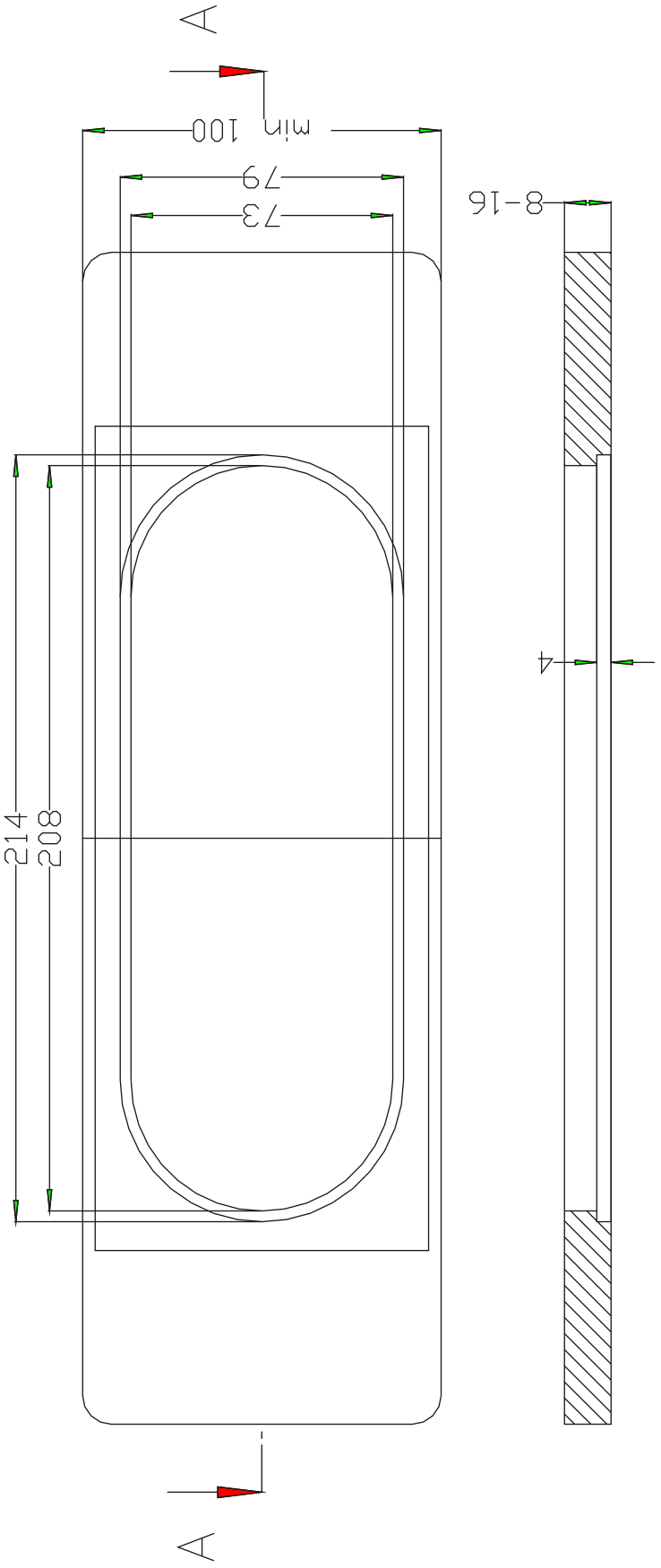
ELS Control Unit Keypad
Control Unit Box - Technical drawing B



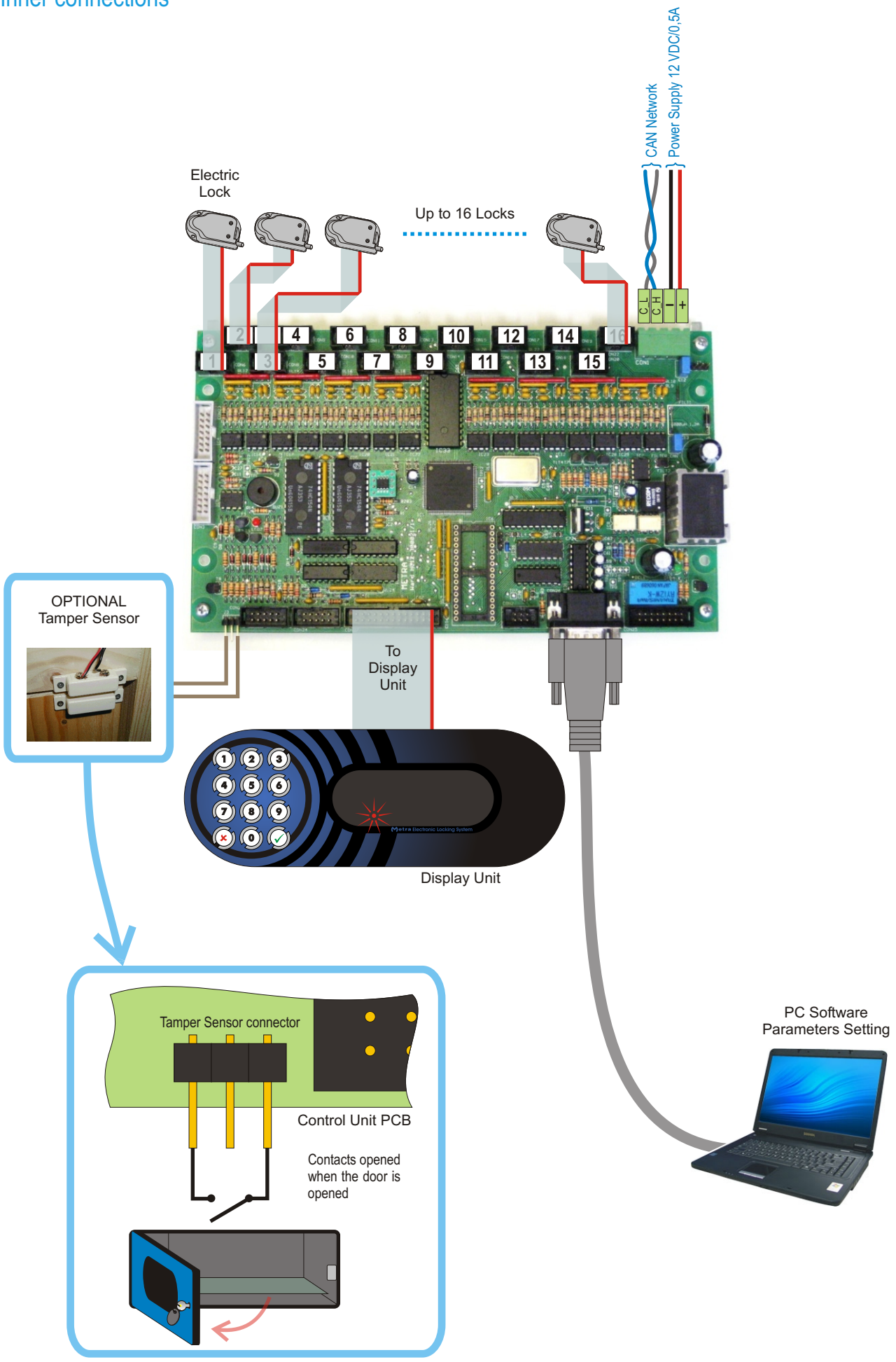
Detail A



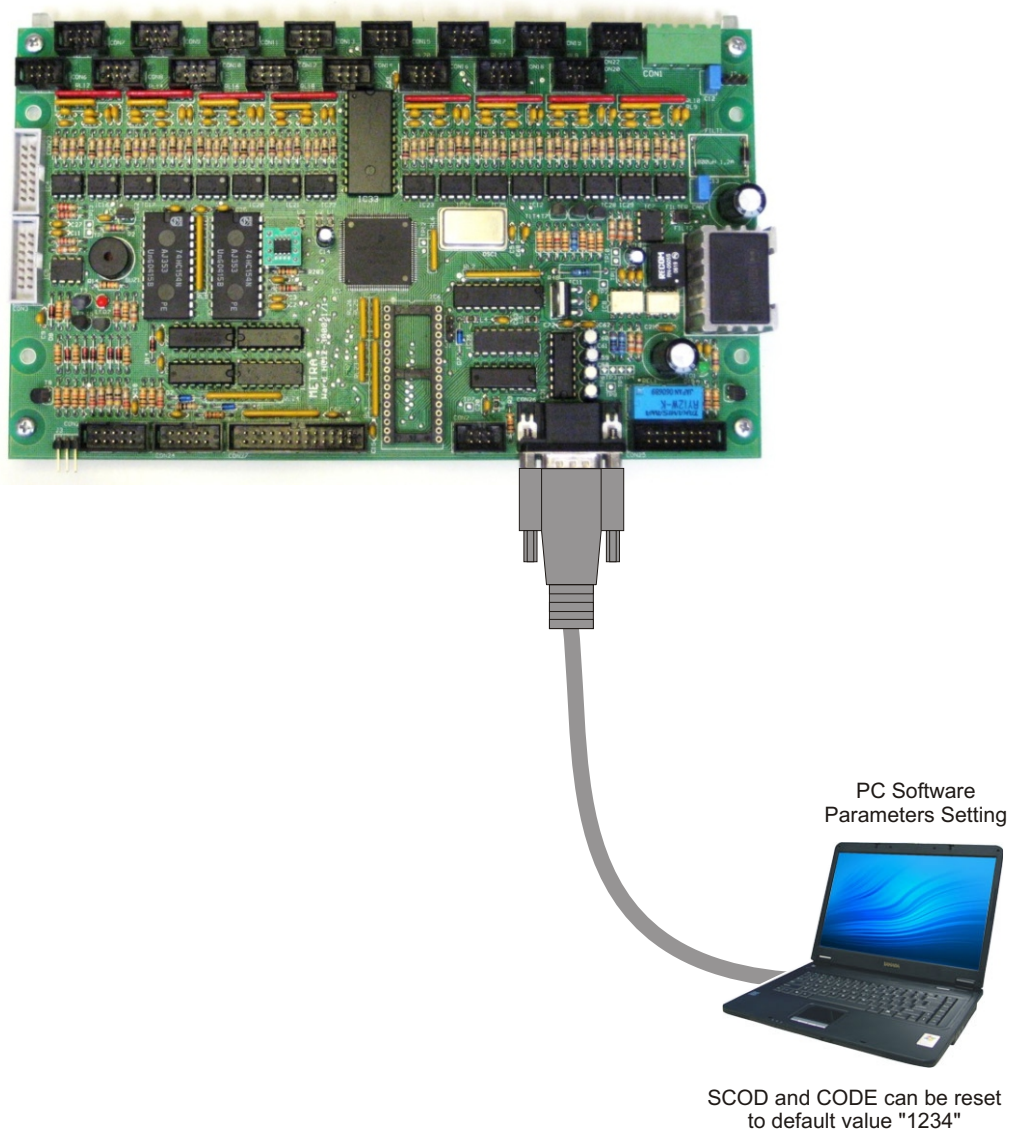
ELS Control Unit Keypad
Front panel - Technical drawing of Display Unit



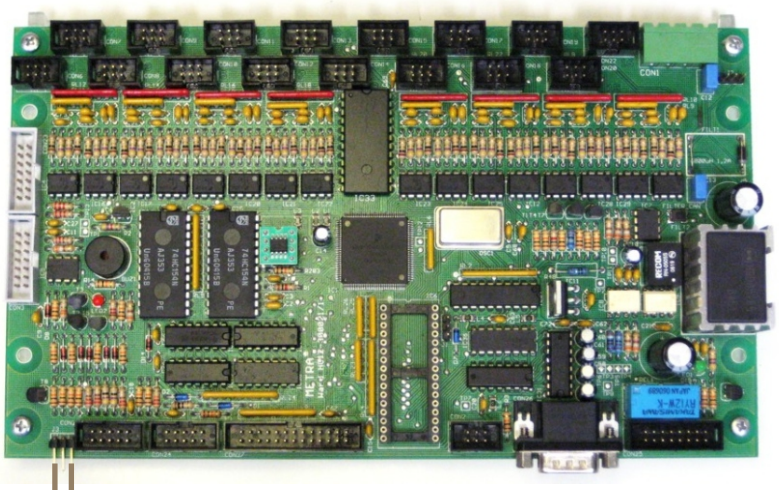
ELS Control Unit Keypad
Inner connections

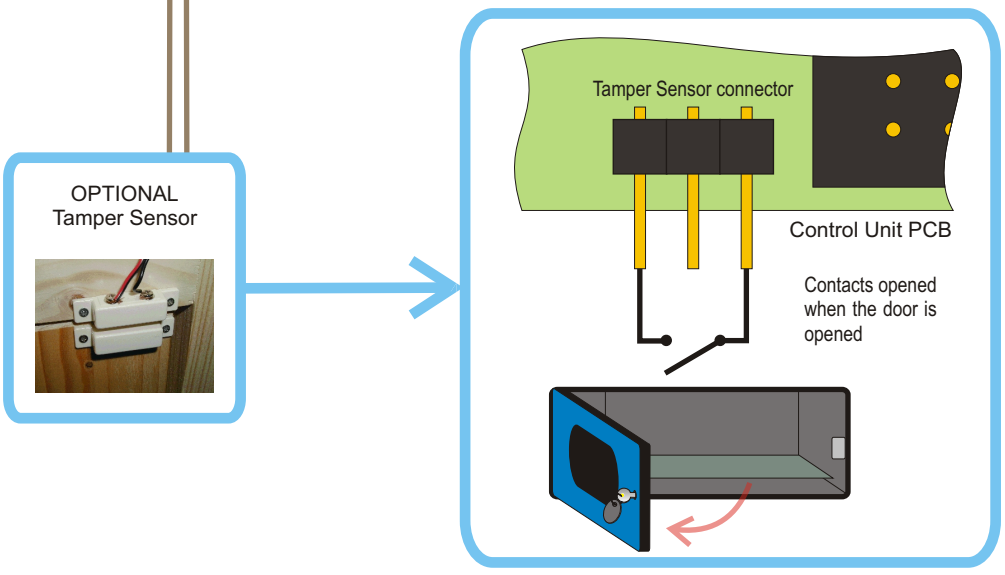


ELS Control Unit Keypad
Download connection

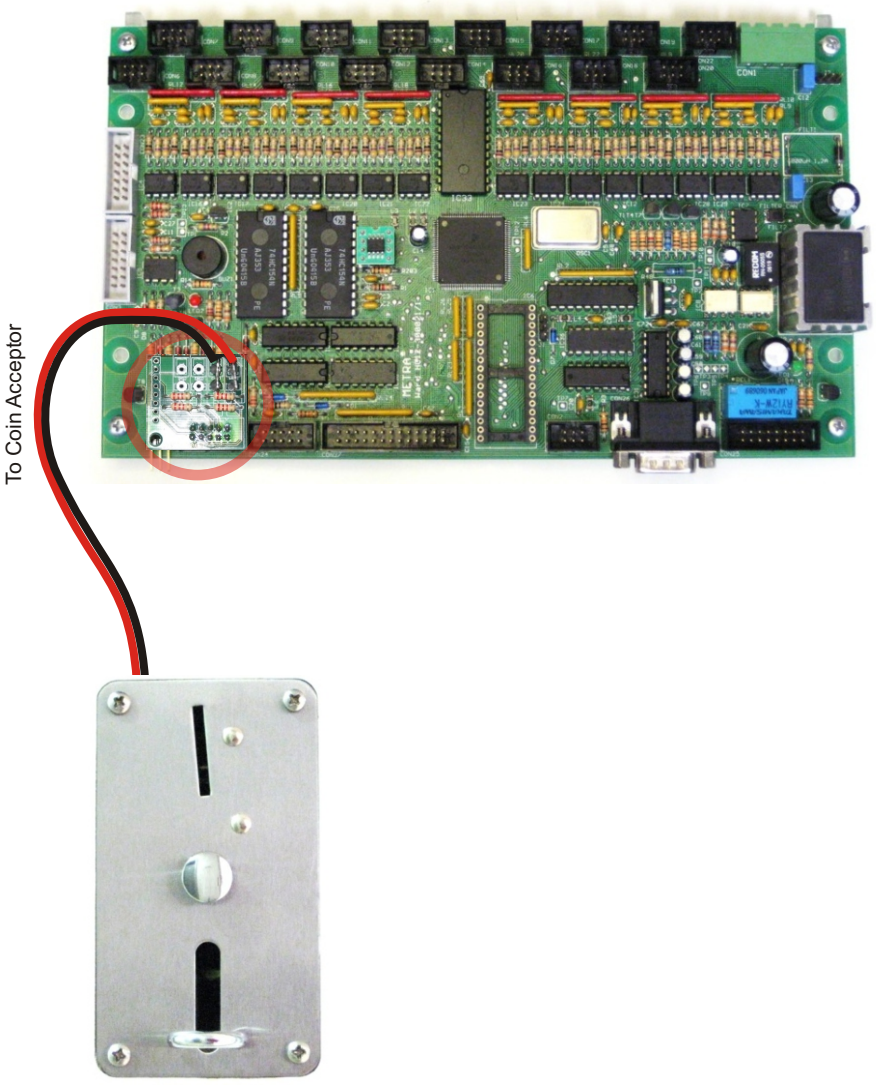


ELS Control Unit Keypad
Tamper alarm sensor (optional)

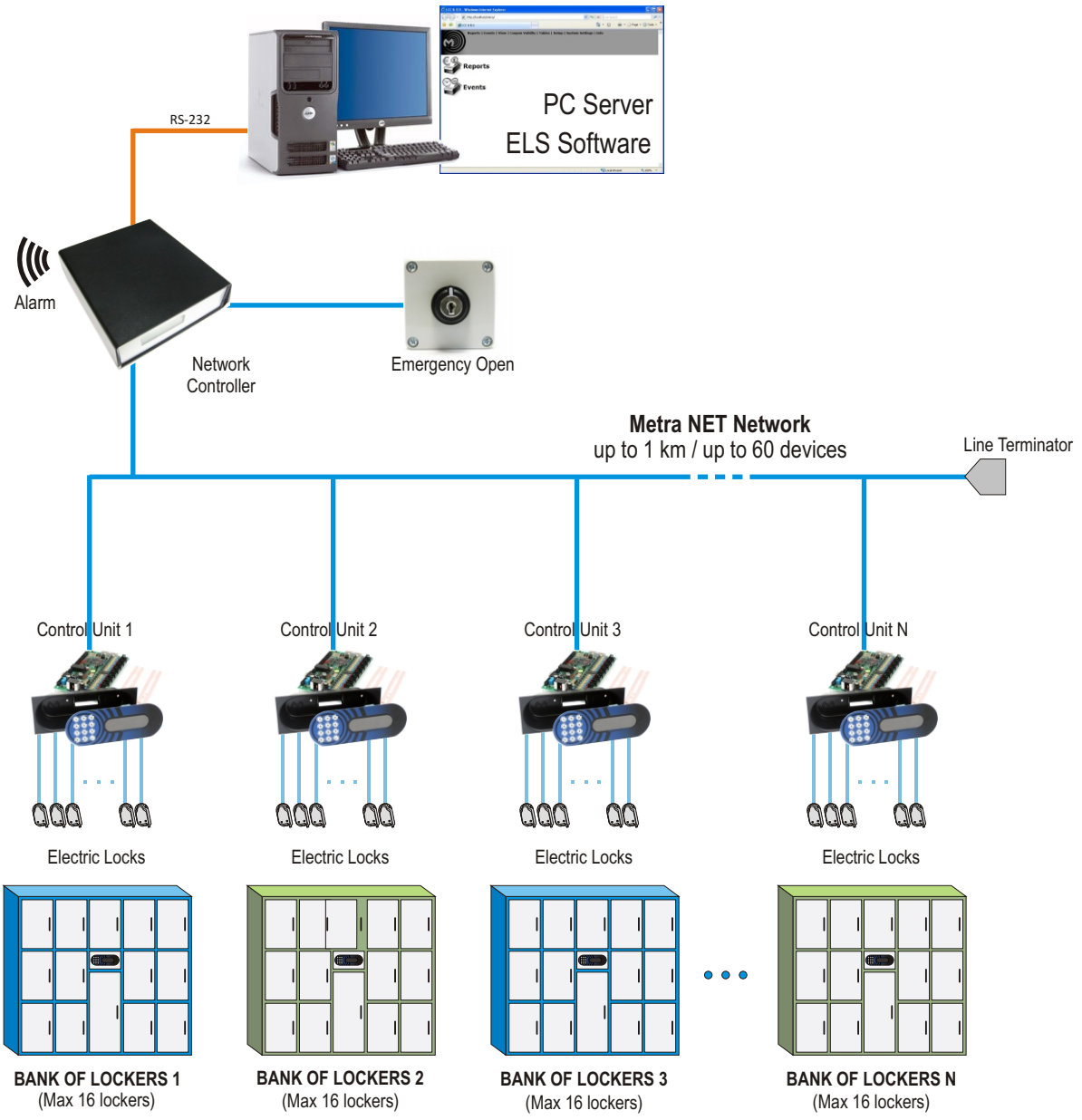




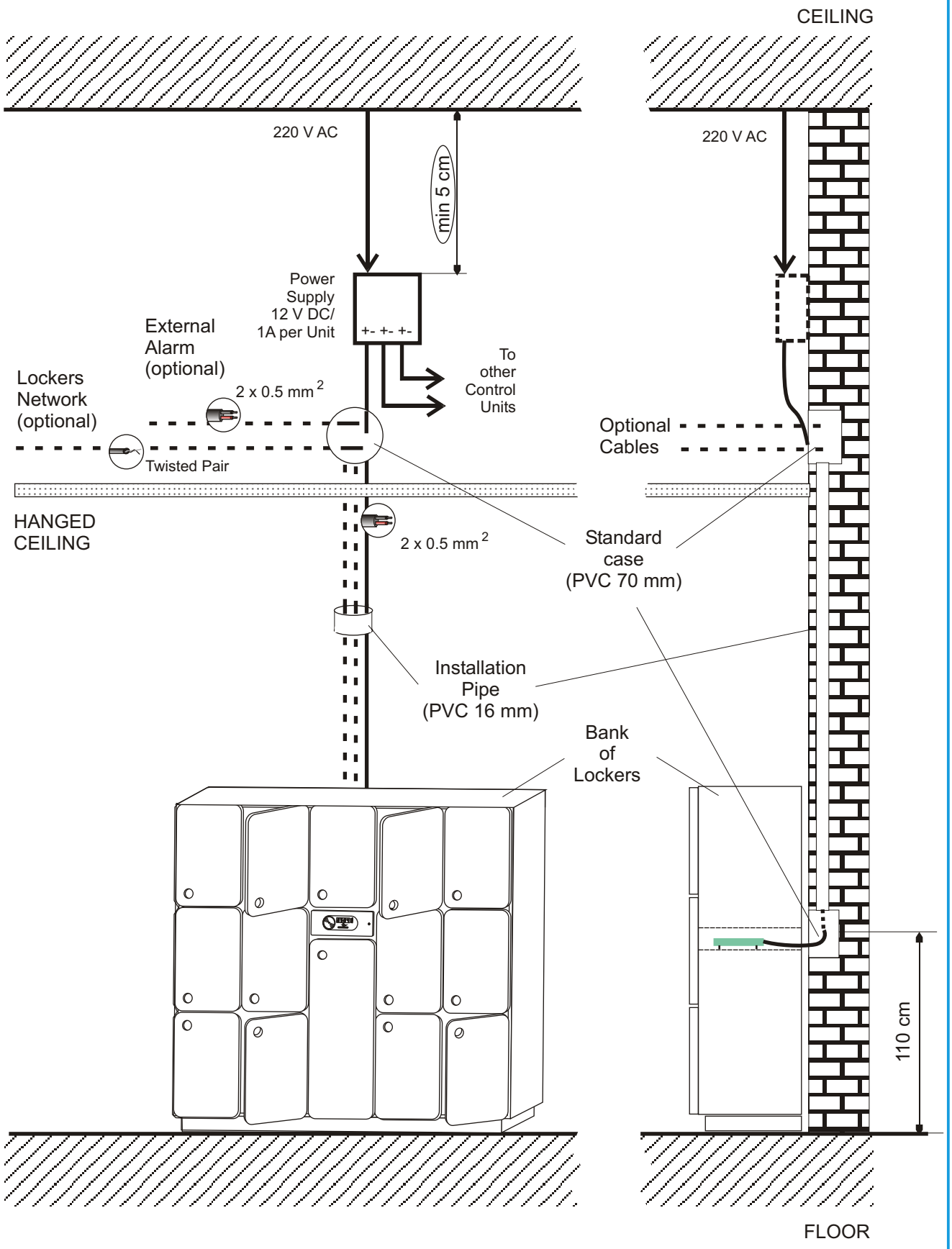
ELS Control Unit Keypad
Coin acceptor (optional)



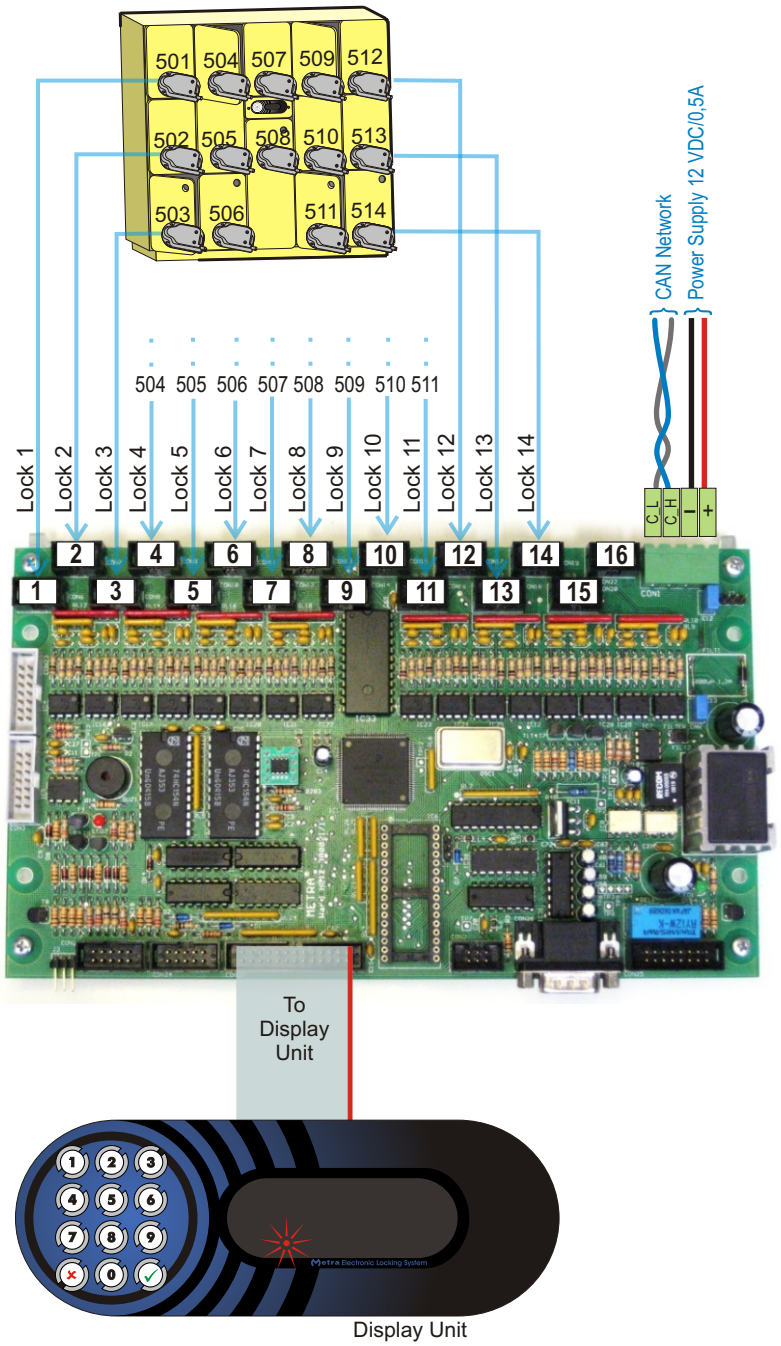
ELS Control Unit Keypad
Network schematic



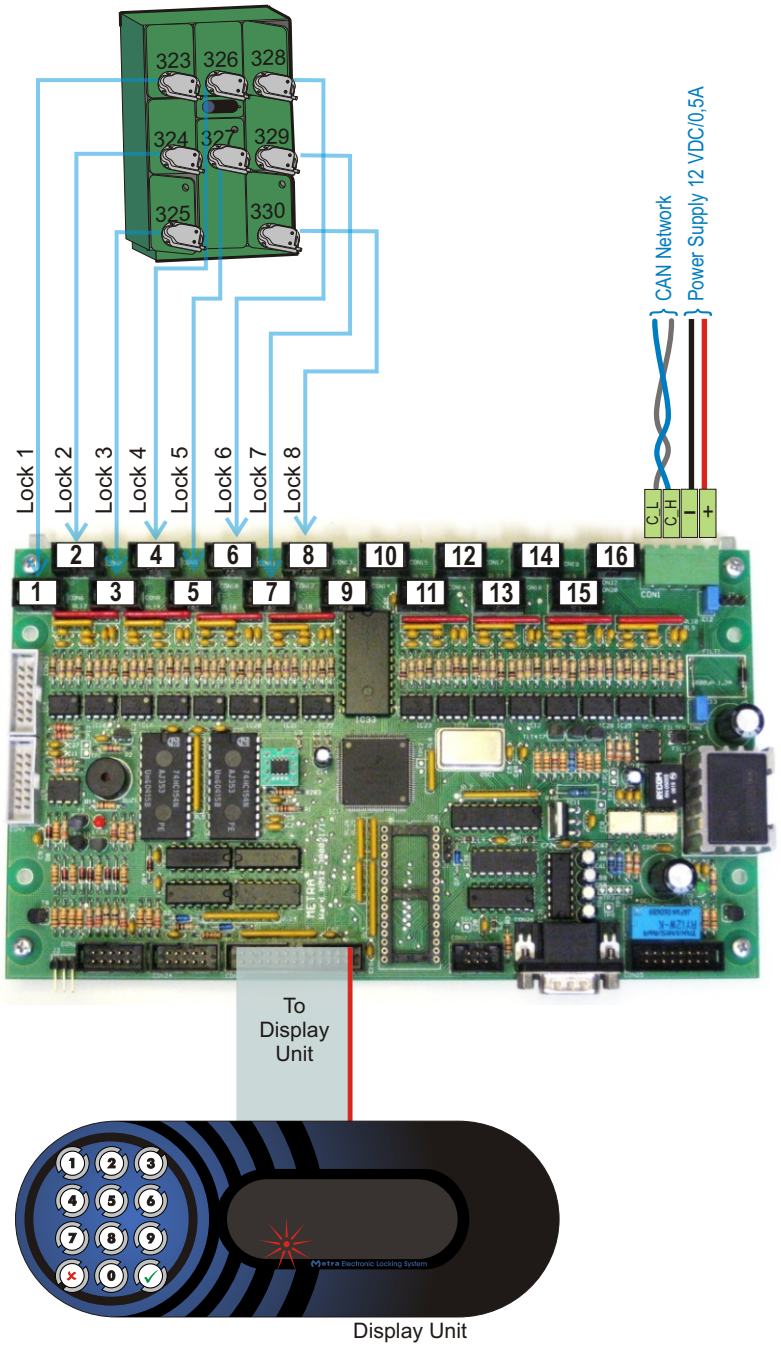
ELS Control Unit Keypad
Cable installation



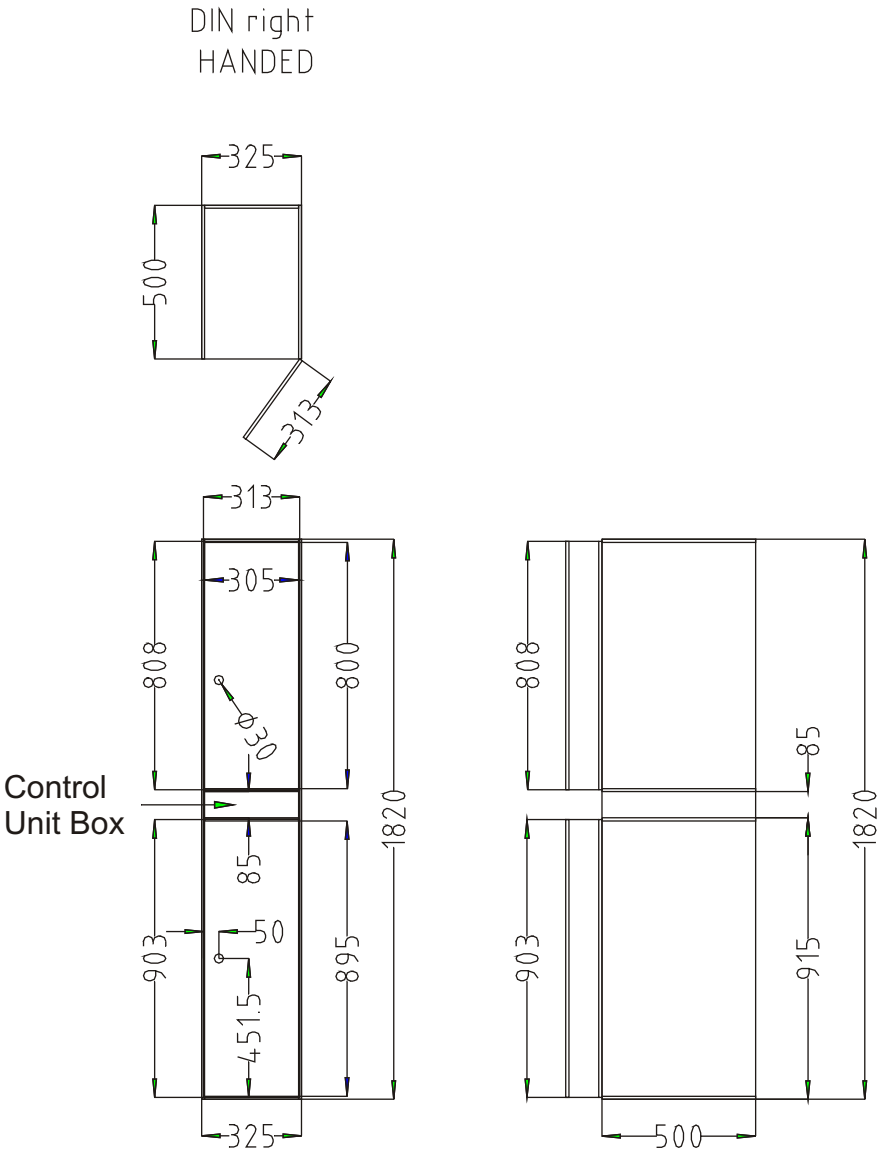
ELS Control Unit Keypad
Electric Locks connection (example 1)



ELS Control Unit Keypad
Electric Locks connection (example 2)

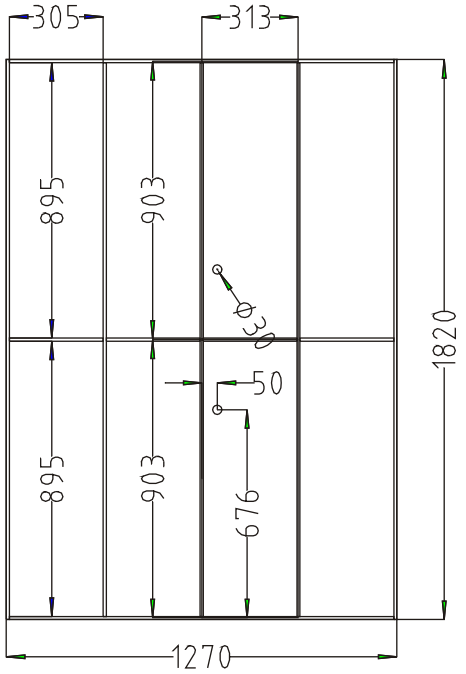


ELS Control Unit Keypad
Main Module (example)

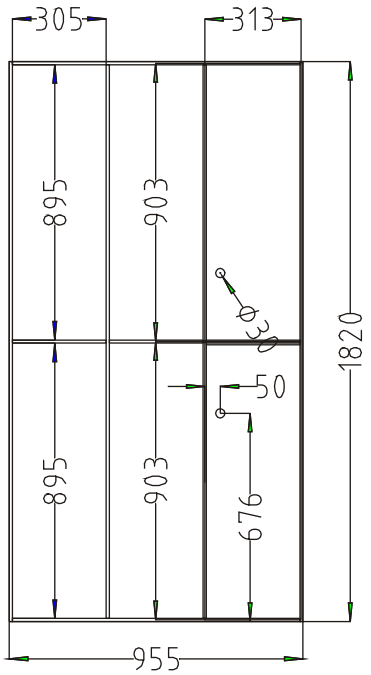


ELS Control Unit Keypad
Standard Module (example)

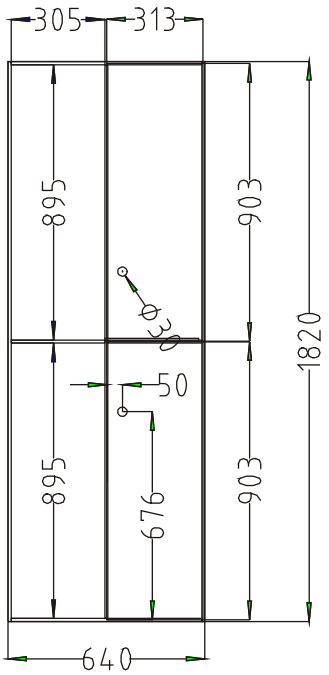
8 boxes
M3



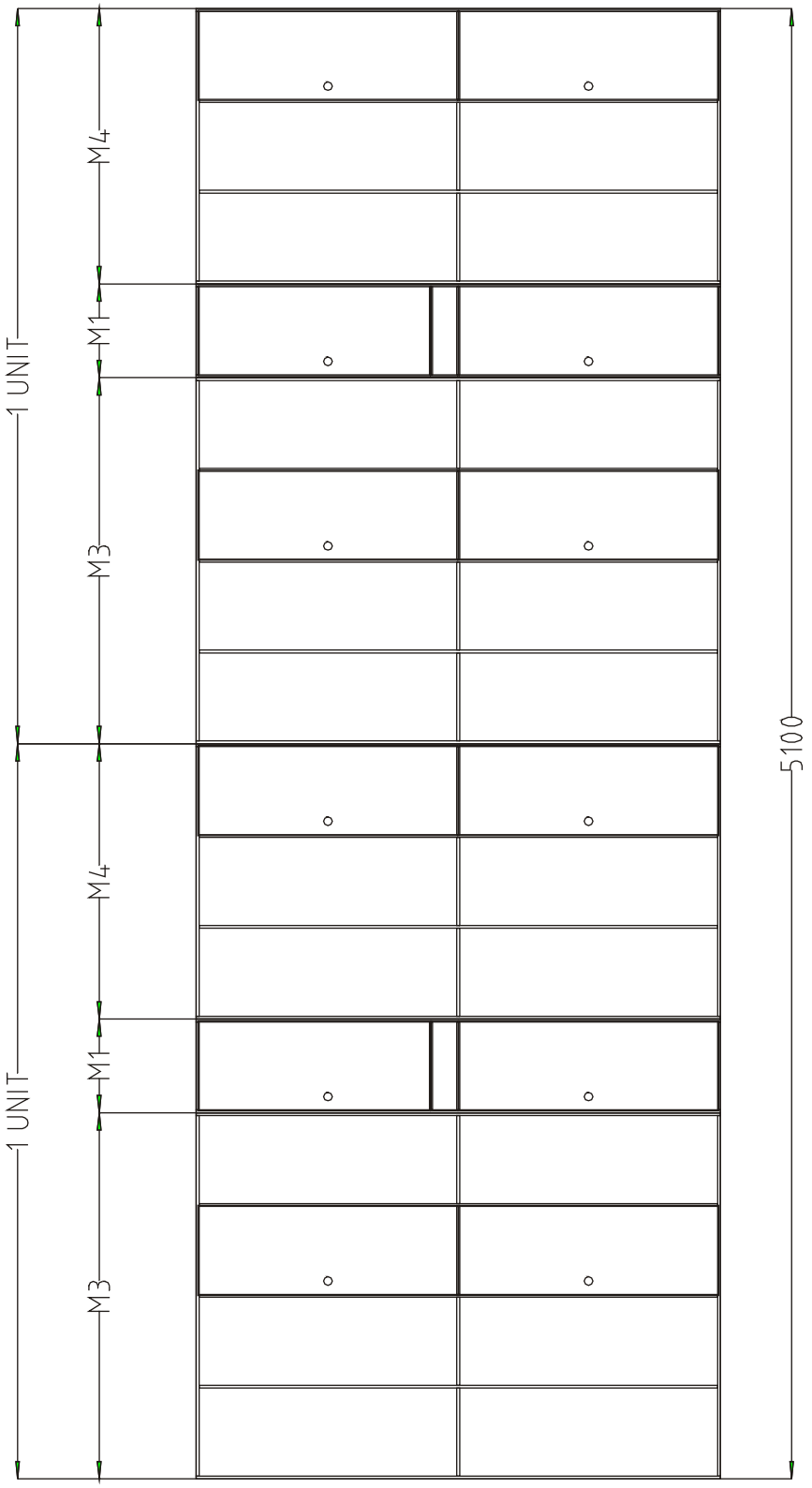
6 boxes
M4



4 boxes
M5



ELS Control Unit Keypad
Bank of lockers (example)



32 boxes

Cabinets - 1.st floor area at the wall - right.